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09/655,987	09/06/2000	Calvin B. Ward	54391	9378

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EXAMINER
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DICUS, TAMRA

ART UNIT	PAPER NUMBER
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1774

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 09/655,987  
Filing Date: September 06, 2000  
Appellant(s): WARD, CALVIN B.

**MAILED**  
JUL 13 2006  
**GROUP 1700**

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Calvin Ward  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 04-27-06 appealing from the Office action mailed 05-31-05.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The following are the related appeals, interferences, and judicial proceedings known to the examiner which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal:

Application 10/278,190.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

3,342,613	SCHELHORN	09-1963
5,151,091	GLAUG et al.	09-1992

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5,486,411	HASSENBOEHLER, JR. et al.	01-1996
6,261,679	CHEN et al.	07-2001
5,916,204	MILANI	06-1999

### **(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 19-20 are rejected under 35 U.S.C. 102(b) as being anticipated by USPN

3,342,613 to Schelhorn et al.

Schelhorn teaches a protective covering for protecting an exposed surface: a water-impermeable electrostatically charged sheet (Schelhorn, 10, FIG. 2 and associated text, col. 2, line 25, waterproof and impermeable are equivalent to water-impermeable characteristics), and an absorbent layer (Schelhorn, 12, FIG. 2 and associated text) wherein said bottom surface of said absorbent layer being in contact with said top surface of said electrostatically charged sheet.

Schelhorn teaches the protective covering of instant Claim 19, wherein said absorbent layer comprises paper (Schelhorn, col. 1, lines 55-60) (instant claim 20).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 7-8, 19-21, and 25-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,151,091 to Glaug et al. in view of USPN 5,486,411 to Hassenboehler, Jr. et al.

Glaug teaches a protective covering for protecting an exposed surface: a water-impermeable sheet of nonwoven material (Glaug, 190, FIG-2 and associated text, moisture-impermeable is equivalent to water-impermeable quality), and an absorbent layer (Glaug, 160 and 165, FIG-2 and associated text) wherein said bottom surface of said absorbent layer being in contact with said top surface of said water-impermeable sheet wherein said absorbent layer is divided into a plurality of cells (Glaug, spaces between 150 named canals (col. 6, line 11) or chambers denoted 115, FIG-2 and associated text) for containing liquid within the boundaries of said cells, said liquid is prevented from moving between said cells (see Glaug, FIG-2 and col. 6, lines 10-15) (regarding claims 1, 19 and 28). Further regarding claims 2 and 20, Glaug teaches the protective covering of Claims 1 and 19, wherein said absorbent layer comprises paper or polymeric foam (col. 2, lines 60-65 – col. 3, line 5, absorbents of wood pulp or cellulosic fiber embraces paper). Glaug also teaches regarding claims 3 and 21, the protective covering of Claims 1 and 19, where said absorbent layer comprises an open cell foam (col. 4, lines 14-15).

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Further regarding claims 7 and 25, Glaug teaches a plurality of hydrophobic barriers defining said cells (Glaug, 140, FIG-2 and associated text, fluid repellent barrier is equivalent to hydrophobic barrier). Glaug also teaches regarding claims 8 and 26, an hydrophobic layer bonded to the top surface of said absorbent layer, wherein said hydrophobic layer has a plurality of pores to render the materials pervious to fluids (Glaug, 170, FIG-2 and associated text, and col. 6, line 35-37, apertures throughout the cover film to render the materials pervious to fluids is considered equivalent to a plurality of pores that allow liquid to penetrate said hydrophobic layer and be absorbed by said absorbent layer). Glaug teaches cover 170 is of synthetic polymers in FIG-2 and teaches cover 470 is of synthetic polymers that are hydrophobic and thus 170 and 470 are equivalents further regarding claims 8 and 26.

Regarding claims 1 and 27, the water-impermeable sheet is bonded via adhesive (180, FIG-2) to said underlying absorbent layer.

Glaug does not teach said water-impermeable sheet is an electrostatically charged sheet.

Hassenboehler teaches applying an electrostatic field to nonwoven webs as a treatment to improve filtration among other advantages (col. 3, lines 25-35, col. 8, lines 24-25, and col. 18, lines 10-15) used in diapers or hygiene products.

It would have been obvious to one of ordinary skill in the art to have modified the water-impermeable sheet of Glaug to have electrostatically charged the sheet because Hassenboehler teaches applying electrostatic charges to nonwovens used in diapers or hygiene products results in improving filtration or breathability (col. 3, lines 25-35, col. 8, lines 20-25, and col. 18, lines 10-15 of Hassenboehler).

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Claims 5 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,151,091 to Glaug et al. in view of USPN 5,486,411 to Hassenboehler, Jr. et al. and further in view of USPN 6,261,679 to Chen et al.

The combination of Glaug and Hassenboehler is applied above to claims 1 and 19.

While Glaug teaches absorbent material of paper or open cell foam or fibers, Glaug does not expressly define a fibrous mat *per se* (claims 5 and 23).

Chen teaches absorbent fibers including open cell foam and additionally fibers of pulp that are in the form of fiber mats used in absorbent disposable products intended for the absorption of fluid such as body fluid (Abstract, col. 15, lines 30-65, and col. 26, lines 59-68).

It would have been obvious to one of ordinary skill in the art to have modified the covering of Glaug and Hassenboehler to have substituted absorbent material of paper, fibers or open cell foam for an absorbent layer comprising a fibrous mat because Chen teaches the same materials are functional equivalents (Abstract, col. 15, lines 30-65, and col. 26, lines 59-68 of Chen).

Claims 4 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,151,091 to Glaug et al. in view of USPN 5,486,411 to Hassenboehler, Jr. et al. and further in view of USPN 5,807,366 to Milani.

The combination of Glaug and Hassenboehler is applied above to claims 1 and 19.

The combination does not teach said foam is electrostatically charged.

Milani teaches absorbent fibers, fiber webs, foams, and films are electrostatically charged and thereby improves liquid distribution (col. 13, lines 25-35 of Milani). Milani teaches the same materials of fibers of polymer or paper (col. 10-col. 13, line 10).

It would have been obvious to one of ordinary skill in the art to have modified the combination to have a foam electrostatically charged because Milani teaches the same materials in various forms such as fibers, fiber webs, foams, and films are electrostatically charged to improve liquid distribution (col. 10-col. 13, lines 25-35 of Milani).

Claims 6 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,151,091 to Glaug et al. in view of USPN 5,486,411 to Hassenboehler, Jr. et al. and further in view of USPN 6,261,679 to Chen et al. and further in view of USPN 5,807,366 to Milani.

The combination of Glaug, Hassenboehler, and Chen is applied above to claims 1 and 19.

The combination does not teach said fibrous mat is electrostatically charged (claims 6 and 24).

Milani teaches absorbent fibers, fiber webs, foams, and films are electrostatically charged and thereby improves liquid distribution (col. 13, lines 25-35 of Milani). Milani teaches the same materials of fibers of polymer or paper (col. 10-col. 13, line 10).

It would have been obvious to one of ordinary skill in the art to have modified the combination to have a fibrous mat electrostatically charged because Milani teaches the same materials in various forms such as fibers, fiber webs, foams, and films are electrostatically charged to improve liquid distribution (col. 10-col. 13, lines 25-35 of Milani).

#### **(10) Response to Argument**

Appellant argues the use of Schelhorn to contentions that the reference does not teach an electrostatically charged, permanent charge (a charge that remains on the sheet at the end of treatment) although acknowledging that Schelhorn teaches an electrostatic treatment is applied to the water-impermeable sheet. The Appellant has not persuasively argued because Appellant has



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not claimed a permanent charge that remains on the sheet at the end of treatment and Schelhorn explicitly teaches the same layers in contact and electrostatically treating a water-impermeable film. By definition “electrostatic” means an electric charge is present. Because the treatment is on the film, electric charges are present within or on the film. At some point, it must contain a charge, Appellant has not limited the claim to an amount of charge the sheet must hold.

Appellant also contends that merely subjecting a plastic to an electrostatic treatment does not necessarily lead to an electrostatically charged sheet. However, Appellant does not present objective evidence to prove this point. Thus because the same film construction and electric charge is present, the same end product is obtained.

Appellant argues that Hassenboehler teaches electrostatically charging a porous film to provide improved filtration of a medium passing through the film and that a porous film is not water-impermeable. To the contrary, Glaug explicitly teaches a nonwoven that is water-repellent (col. 5, lines 48-50). Secondly, Hassenboehler teaches a nonwoven is electrostatically charged using voltage (col. 6, lines 1-15) as Appellant does (instant specification page 3 of 4, lines 19-25), for improving filtration efficiency of a variety of mediums. Appellant’s use of the term “filtration” as argued does not limit the term to solely water filtration. For instance, filtration can include any medium through which something travels such as filtering dust particles or air. The Examiner respectfully submits that the Appellant is misconstruing the teachings of Hassenboehler. The teachings of Hassenboehler do not limit filtration to any particular medium and includes all fluids i.e. gas and liquids (col. 13, line 15 and Table I data shows air (%) being filtered). Further, Appellant argues that the nonwoven sheet 190 of Glaug does not provide any filtration function and would not be combinable with Hassenboehler because the article would

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fail at its intended purpose and leak through the pores. Agreeably Hassenboehler teaches a nonwoven web that can have some degree of porosity, however it should be noted that he also teaches the nonwoven web is ideally suitable for applications such as diapers, air filters, face masks, respirators, surgical masks, diapers and hygiene products (col. 3, lines 33-35), items where filtration efficiency is necessary, yet water-permeability is not necessarily desired. For instance, one would not desire a diaper or hygiene product to be water-permeable (as the function of a diaper or hygiene product is to contain bodily fluids) and would desire air-permeability to provide breathability to aid in reducing wetness against skin. Moreover, Hassenboehler teaches his webs exhibit improved filtration and long life at the improved filtering efficiency levels (col. 3, lines 49-51). Clearly, the teachings of Hassenboehler provided direction to the skilled artisan as to what parameters are critical, namely improved filtering efficiency and long life at the filtration efficiency and a suggestion to the skilled artisan as to how to arrive at the increased efficiency at the improved levels. Thus, in view of the teachings, it would have been obvious to electrostatically charge a nonwoven to arrive at Appellant's instant invention. Under Section 103, the obviousness of an invention cannot be established by combining the teachings of the prior art references absent some teaching, suggestion or incentive supporting the combination. *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). This does not mean that the cited prior art references must specifically suggest making the combination. *B.F. Goodrich Co. v. Aircraft Braking Systems Corp.*, 72 F.3d 1577, 1582, 37 USPQ2d 1314, 1318 (Fed. Cir. 1996); *In re Nilssen*, 851 F.2d 1401, 1403, 7 USPQ2d 1500, 1502 (Fed. Cir. 1988)). Rather, the test for obviousness is what the combined teachings of the prior art references would have suggested to those of ordinary skill in

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the art. *In re Young*, 927 F.2d 588, 591, 18 USPQ2d 1089, 1091 (Fed. Cir. 1991); *In re Keller*, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981). This test requires us to take into account not only the specific teachings of the prior art references, but also any inferences which one skilled in the art would reasonably be expected to draw therefrom. *In re Preda*, 401 F.2d 825, 826, 159 USPQ 342, 344 (CCPA 1968).

Appellant argues that the canals taught in Glaug are open ended and the barriers will not contain the liquid within the boundaries of the cells and will allow liquid to flow between chambers when full. Appellant has not claimed a certain time when liquid does not flow. Moreover, Glaug explicitly teaches the fluid repellent barriers include not only open cell foams but also closed cell foams (col. 4, lines 13-15) and teaches the liquid is indeed contained at col.6, lines 14-15 (i.e. fluid flows longitudinally within the absorbent without spilling over or transferring into adjacent canals) and as shown in FIG-2. Further Appellant claims open celled absorbent material.

Appellant argues claims 2 and 20 contending the absorbent layer does not include paper. The skilled artisan reading the absorbent materials listed at col. 3, lines 2-5 of wood pulp and cellulosic fiber would understand this material embraces paper.

Appellant argues claims 3 and 21 of Glaug at col. 4, lines 14-15 teaching the absorbent layer comprises an open cell foam and is for constructing the barriers not the absorbent layer. The Appellant should note col. 4, lines 5-15 explicitly teach the barrier is within the absorbent layer and the absorbent comprises open cell foam as the claim recites.

Appellant argues Milani does not teach that charging an absorbent layer provides improved liquid distribution, but improving liquid distribution in a fibrous web by introducing

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absorbent particles into the web and would not be better than the absorbent in Glaug. First, Appellant is arguing that liquid distribution is present, but argues how liquid distribution occurs. Appellant has not excluded particles from the claims. Milani is used to teach electrostatically charged foams, films or fibers in absorbents improves liquid distribution (col. 10-col. 13, lines 25-35 of Milani). Second, liquid distribution is indeed desirable in absorbent layers as Milani teaches for absorbing an amount of liquid such as water, urine, menses or blood (col. 3, lines 56-65). The skilled artisan understands such concerns are desirable in hygiene products and would be combinable with Glaug to arrive at Appellant's instant invention.

Appellant argues that it should be noted that even if the underlying fibers or web is permanently charged, the charge would be cancelled by the oppositely charged particles that are coupled to the web, however, Appellant provides no objective evidence to prove this point.

Appellant argues the combination of Glaug, Hassenboehler and Chen applied in the rejections of claims 5 and 23 from which the claims at issue depend, not claims 1 and 19. Claims 5 and 23 depend from claims 1 and 19, and are rejected under Glaug and Hassenboehler. Chen is used to reject claims 5 and 23 as a further reference to supplement Glaug and Hassenboehler.

Appellant argues that Chen does not teach electrostatically charging and holding a charge. Again, a permanent or holding charges are not claimed. Further Chen was used to teach the various equivalent absorbent materials of open cell foam and pulp in the form of fibrous mats used in absorbent disposable products intended for the absorption of fluid such as body fluid (Abstract, col. 15, lines 30-65, col. 25, lines 59-68 of Chen).

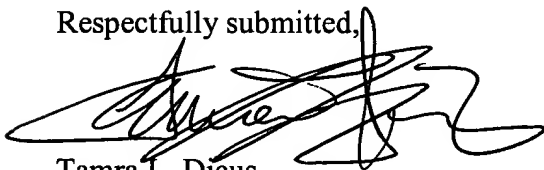
For the above reasons, it is believed that the rejections should be sustained.

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**(11) Related Proceeding(s) Appendix**

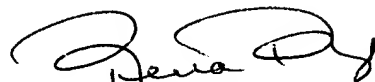
No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

Respectfully submitted,



Tamra L. Dicus  
Examiner  
Art Unit 1774


[tld]  
June 26, 2006



RENA DYE  
SUPERVISORY PATENT EXAMINER

A.U. 1774 7/1/06

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